

Title page

Title of article: Developing healthy weight maintenance through co-creation: a partnership with Black African migrant community in East Midlands

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Abstract

Background: Obesity prevalence in the UK varies according to ethnicity, with children from minority ethnic groups experiencing higher levels, and yet, there is a scarcity of projects that involve minority ethnic groups in the design of interventions to promote healthy weight maintenance. This paper presents an account of the involvement of the participants in a co-creation activity to design public health resources for the maintenance of healthy weight.

Methods: The material is drawn from a study that involved Black African parents (n=30) and Health Visitors(n=32), residing and working in the East Midlands, UK, respectively. The participants were purposely selected according to an inclusion/exclusion criterion and invited to participate in seven focus groups (FG) conducted for parents (FG-4) and health visitors (FG-3) at a time and place convenient to the participants. Following the focus groups, the Black-African parents participated in three co-creation workshops.

Results: The co-creation activities involved the participants, the researcher and a nutritionist. The outcome was an African heritage eatwell guide and a framework to promote healthy weight, which was well-received when presented to members of the community and local health and social care practitioners.

Conclusion: The co-creation process went beyond giving the participant a voice in shaping the promotion of healthy weight within their community, as they also became active participants in the design and creation of the specific public health service. The approach offered the potential for improved levels of community satisfaction for a public health intervention.

Key words: Black-African, co-creation, co-design, healthy weight, migrants

Introduction

Co-creation is defined as an approach or strategy for developing 'person-centred' services that meet the needs of individuals and communities¹. The collaborative process of producing new initiatives by involving both the service provider and the recipient relies on the knowledge that the successful development of the innovative services should meet the needs and satisfaction of communities, as well as depending on the perspective of the end-users². In reality, co-creation also describes a shift in thinking, from needs and interventions being defined and developed solely by service providers³ to a more participative process, in which experts and communities collaborate to generate and build meaning⁴. At the same time, co-creation that is aimed at achieving behavioural change should engage end-users, helping them understand their current needs and behaviours, as well as the facilitators that are crucial for this behavioural change⁵. Similarly, for a successful co-creation process, it is vital to build a collaborative relationship with end-users as they are more likely to determine the workability of the intervention⁶. In this paper, the co-creation process refers to the active participation of the East Midlands' (UK) Black African migrant community in the identification of the need for – and the production of – an African heritage tool for promoting healthy weight maintenance. The paper discusses the outcome of the co-creation process in terms of developing materials and strategies concerning Black African migrant parents who expressed the need³ for an African heritage healthy weight maintenance strategy.

Addressing childhood obesity by focusing on the early years has become a national priority in the UK⁷. Similar to other European countries and the US, the UK is battling a childhood obesity epidemic, with nearly a third of children in England currently either overweight or obese. The current estimates suggest that almost a third of children aged between 2 and 15 are overweight or obese in the UK, with younger generations becoming obese at an earlier age and staying obese for longer⁸. Globally, approximately 41 million children under the age of five are either obese or overweight⁹. The prediction is that these rates are likely to increase to a stage whereby two-thirds of children will be overweight or obese by 2050^{9,10}. However, on examining the figures of childhood obesity by ethnicity, the prevalence in England is found to be lower in children who are White British compared to children from Black and minority ethnic (BME) groups^{8,11}. Despite this increased risk of obesity among Black African children, public health strategies that incorporate participation from the Black African migrant community in the UK are sparse. Although the literature review identified a wide variety of obesity-related health promotion interventions^{12,13}, interventions initiated in partnership with the Black African migrant community in the UK and Europe as a whole remain scarce. This limited evidence suggests an undeniable need for a co-creation strategy that will address this widening health inequality.

Proponents of healthy weight maintenance programmes in early childhood have argued that parents should be at the centre of such programmes. Involving parental contribution in developing healthy weight strategies in early childhood is essential^{14,15}; not only can they be role models to their children, but their support will also subsequently enable healthy weight maintenance for the children¹⁴. Parents will also be in a position to provide confirmatory conditions that would help their children choose healthy behaviours, therefore, when it comes to constructing their children's life choices with regards to a healthy weight¹⁵, the participation of parents is vital¹⁴. Other studies focusing on parents have also demonstrated a significant decrease in fat mass when parents become involved in their children's health¹⁶. Furthermore, if parents recognise the importance of weight control, they will be motivated to promote healthy weight in their children; they, therefore, play an essential role in long-term weight control¹⁷. Through participating in healthy family meals, for instance, children can eat more whole grains, fruits, vegetables, and low-fat milk, as well as consuming fewer sweets and unhealthy fats. Consequently, co-creating healthy weight strategies with parents in early childhood is critical¹⁸.

This study draws on data from a community-based qualitative study that examined the socio-cultural, familial, and environmental factors influencing healthy weight in Black African children during early childhood¹⁹. The participants for the study were Black African parents (n=30) and health visitors (n=32), residing and working in the East Midlands, UK. The focus of this paper is on the partnership work with Black African migrant participants to co-create culturally sensitive resources and frameworks that will promote healthy weight maintenance in early childhood. Ethical approval for the study was granted by the corresponding author institution, Faculty of Health and Life Sciences Research Ethics Committee (HLS FREC Ref: 2065) and the NHS Health Research Authority (Ref: 18/HRA/0451).

Methods

The first phase of the co-creation process was identifying the problem; this was achieved from four focus group discussions (FG-4) conducted with Black African migrant parents between March and June 2018. The principles of purposive sampling were applied to identify 30 Black African migrant parents – 15 women and 15 men (age range 24-55) – who participated in the focus groups comprising 7- 8 participants (FG female = two and FG male = two). The participants were recruited through several voluntary and statutory organisations. The gatekeepers included community leaders and members of health and social care providers, and between them, these individuals and groups 'allowed' the researchers access to the parents. The sample was designed to recruit Black African parents, the only requirement being that they needed to have a child or children between the ages of six months and five years

living at home (see table 1). The ethnic origin of the parents was identified using the UK categories²⁰. The FG explored participants' understanding of a healthy diet, their experiences of a healthy diet, and the challenges to healthy weight maintenance they had to face in early childhood. The date, time and venue for the FGs were agreed on beforehand with the participants. Venues included: community centres and places of worship. The FGs lasted between 60-90 minutes, and all discussions were recorded using a digital voice recorder and transcribed accordingly. Data analysis involved the use of thematic analysis²¹ to identify themes within the data, and a qualitative software package²² was used to aid the analysis process. Several general themes had already been identified through ongoing reflection during the focus group process, which was used for the initial coding. The thematic analysis also included reading and re-reading the texts to identify consistencies and differences before organising them into categories. This was followed by a systematic process to identify components that were central to the aims of the study. In analysing the findings from the different focus groups, the results that emerged were broadly similar irrespective of the participants' genders, ages, and number of years spent in the UK and in their country of origin. Therefore, their findings are presented as a part of the whole. The interim results were also discussed with Black African parents at a community event, to ensure that the final categories were informed by the participants and to minimise the influence of the researchers' interpretations.

Results

This paper focuses on two key areas of felt and expressed needs³ identified by the participants during the focus group discussions, which then informed the co-creation process:

- Training and practical resources for health and social care practitioners
- A system-based approach to promoting healthy weight in Black-African children

Training and practical resources for public health practitioners

In identifying the problem, the participants discussed how practitioners lacked the guidance needed to provide culturally specific advice to Black African migrant parents, and expressed a need for specific training that prepares practitioners to work with the Black African parents:

Having a cultural awareness in a way is essential, or someone who has got that awareness to advise about our food. (Parents' FG-1)

I think giving training to health visitors and others in the clinic to help provide culturally appropriate information on diet for children. (Parents' FG-2)

We can provide examples of our food [referring to African-heritage food stuff], that will help with them advise us on a healthy diet, we should be able to determine, what foods are healthy and also group them, like in a healthy diet. (Parents' FG-3)

When I go to the GP clinic, I see photos of a healthy diet, recipe books but not the ones for us [referring to African-heritage foods]. (Parents' FG-3)

The participants discussed how socio-cultural factors should be integrated into a strategy designed to improve weight maintenance, and how public health practitioners could use practical resources to engage with and support Black African families with the maintenance of a healthy weight in early childhood as well as facilitate discussions about healthy diets with a parent or carer during routine home visits.

A system-based approach to promoting healthy weight in Black-African children

The participants in all focus groups also identified the need for a multi-faceted intervention that involves individuals, families, communities, local businesses, statutory and voluntary organisations, and broader societal changes. They described how this approach would ensure the engagement of all relevant stakeholders, from family and community level to public health providers and policymakers, and also drew upon the existing policy frameworks and other resources committed to promoting healthy weight maintenance in early childhood. This approach was vital as it gave the participants a sense of ownership of the process.

It would be better if everything worked together, the whole system working together, having a good job, being able to easily shop for healthy food, having advice that includes different food stuff, empowering families, address the discrimination against migrants, it's important that all these things are addressed and not just focusing on the food, actually the food on the table is influenced by lots of things. (Parents' FG-1)

You know, it's not just the food alone, you just can't be promoting healthy diet without also thinking about how other things affect our lives, it's like we've discussed, to maintain a healthy diet and healthy life you'll need a good job, good place to live, good working hours, access to good foods and not too much fast food like in this area, it should be everyone's business and not just an individual. (Parents' FG-3).

You can't just talk about healthy weight and healthy diet and ignore everything else that makes that possible. You need a good job, good education, shops that are easier to get to, advice that also considers different food. It just can't be healthy weight by itself. (Parents' FG-4)

Co-creation

The use of focus groups facilitated the development of a collaborative relationship between the Black African migrant participants and the lead researcher, a health and social care practitioner and academic. Following the focus groups, the participants were invited to engage in a co-creation activity to co-design the strategy to promote a healthy weight and an African heritage eatwell guide (see figure 1, table 2 and figure 2). This co-creation process included two further workshops with the participants.

The development of an integrated framework and culturally relevant resources for promoting healthy weight maintenance was the motivation of the Black African migrant participants. The involvement of the participants in the co-creation process went beyond providing feedback on the kind of intervention they would like based on their felt and expressed needs, as it included engaging with every phase of the design and development of the eatwell guide and framework. The integrated framework (figure 1), and its accompanying table 2, demonstrates the interrelationships between the factors identified by the participants through the co-creation which is vital if we are to promote healthy weight in early childhood in the Black African migrant parents and their children. At the family level, the intervention includes healthy weight maintenance based on nutrition education and the enhancement of physical activity. In contrast, at the macro level, it would need the support of the local authorities, Clinical Commissioning Groups, the food industry, and the mass media to achieve and sustain these changes, making sure the healthier options are achievable.

The participants also worked in partnership with the researchers to develop an African heritage eatwell guide (see figure 2). A nutritionist with expertise in African descent foodstuffs was also involved, advising on the nutritional contents of each food. The African heritage eatwell guide is designed to provide a visual representation of how the different foodstuffs can contribute towards a healthy balanced diet. The participants in this study also indicated that the eatwell guide could be used to facilitate discussions about healthy weight between the Black African migrant community and other key providers who have responsibility for promoting healthy weight maintenance in early childhood.

Discussion

Within the public health system, studies have identified how healthcare providers could develop services based on service-users' perspectives, including the design of a value co-creation model to explore a new way in which healthcare providers can learn from service-users^{23,24}. Several studies have investigated both the extrinsic and intrinsic motives in order to explain why individuals would be involved in a co-creation process^{6,25}. In a cross-sectional study²⁶ that involved 153 community health nurses working at 11 healthcare organisations in the southern Netherlands, the findings highlighted a positive correlation between patient-centred care and co-creation care in terms of the wellbeing and job satisfaction of the nurses. Thus, they emphasised the need for investment in the co-creation of patient-centred care with the wellbeing and job satisfaction of community health nurses. Another study²⁷ indicated that co-creation to promote person-centred care was strongly and positively associated with the wellbeing and job satisfaction of professionals.

It is argued that finding the right mix of motivating factors that may increase participation is vital for successful co-creation^{28,29}. To encourage involvement in co-creation activities, public health providers need to create programmes that align with the needs of the community. These transcendent motives, which go beyond self-interest, can be seen as benefits of co-creation³⁰. In this project, an interactive process involved in co-creation allowed the gathering of information and knowledge from the participants about their views on designing a service that meets their needs. A practical, collaborative co-creation approach was applied when co-designing the African heritage eatwell guide, and for the co-creation intervention to promote healthy weight in early childhood (see figure 1 & 2; Table 2) with the Black African migrant participants. Through the co-creation process, the Black African parents in this study were instrumental in designing an integrated framework which recognises local and national guidance aimed at promoting healthy weight maintenance (see figure 1 and table 2). Given the scarcity of culturally sensitive healthy weight messages and resources, the participants identified the *need* for an African heritage eatwell guide. The Public Health England eatwell guide³¹ was used as a template to demonstrate how much an individual can eat, overall, from each food group in order to achieve a healthy, balanced diet. In the workshops, the participants identified the common African heritage foods available locally, which led to creating the African heritage eatwell guide (see figure2).

Among the varied benefits that may be associated with co-creation, the ability to garner an increased level of satisfaction remains one of the most crucial benefits for participation³². Thus, public health practitioners should find ways to increase community satisfaction through involvement in co-creation. Equally, from the practitioners' and organisational perspectives, co-creation with members of a community could result in many positive outcomes, such as

increased satisfaction, trust, and compliance within the community^{29,33}. For co-creation to be successful, as our findings indicate, it is crucial to identify the driving force behind a community's desire to contribute. The lack of trust remains a critical issue in getting individuals to engage in co-creation; if those individuals or the community as a whole do not trust, it becomes more challenging to co-create with the organisation³⁴. This highlights the importance of a collaborative dialogue when engaging with communities, not only for knowledge sharing but also for fostering trust and good understanding. In this study, the co-creation process with the Black African migrant participants was successful because of the relationship they had built with the researchers, both through the initial focus group exercise and through their intrinsic desire to contribute to a better understanding of their needs.

Co-creation could be time-consuming, and it could also involve additional costs to public health resources and providers, depending on the type of co-creation. For instance, in co-creation, a community with limited knowledge about an issue could lead to poor innovation outcome³⁵. Conversely, service-users' involvement in co-creation might reduce an organisation's control over its strategic planning and management of ideas and data³⁶. It is vital, therefore, that organisations adapt and respond to communities in different cultural contexts; adapting to cultural differences could result in communities that are more engaged and satisfied in the co-creation process^{29,32,37}. In this study, the co-creation process with the Black African migrant participants was successful because of their intrinsic desire to contribute to a better understanding of their needs, and due to an increased involvement with developing a public health strategy in an area that is crucial for them. The project created a tangible awareness of the rate of obesity within their community, the solutions needed to address these challenges, and a sense of ownership of the resources they created. The participants were keen that the African heritage eatwell guide was shared with local public health practitioners, as well as other health and social care practitioners who work with the community.

The co-creation approach is likely to give service-users the chance to be actively involved in the development and management of a health intervention. This approach supports a shift and a contrast from the traditional 'top-down' method of developing public health interventions. Given that there is limited evidence of intervention research that targets the promotion of healthy weight maintenance in early childhood for the Black African migrant community, the solution required the collaboration of members of the community to co-create these interventions. An advantage of the co-creation process of the African heritage eatwell guide is that individuals who participated are likely to be committed to its implementation³⁸. This approach also led to a shifting paradigm, from professionals knowing and making all the decisions to the participants being involved in the design of an intervention process. A

collaborative approach ensures that co-creation produces a lasting and robust health impact, especially within the specific healthcare setting it is designed to improve³⁴. Although the co-creation approach used in our study emphasises the importance of creating partnerships between researchers, practitioners, and the Black African migrant participants, the activities did not address the structural inequalities migrant families experience³⁹, such as socio-economic inequalities, which participants identified and included in the strategy.

Co-creation has been successfully implemented in several public health initiatives^{5,29,32}, and may be a viable approach to addressing other complex health behaviours. For instance, involving end-users in the design of physical activity among adolescent girls provided them with a sense of autonomy and ownership⁴⁰, which led to increased participation and effectiveness of the intervention. The success of the projects, including the co-creation activity in this study, suggests that it is crucial to have a transition from the traditional model of service delivery to a more collaborative and transparent approach involving community participation from the outset. This offers the potential for improved levels of individual and community satisfaction through effective public health interventions. Though co-creation is increasingly being adopted in health service design, there is limited methodological guidance regarding the process; thus, it is crucial to identify the specific elements of participatory methodology that could be used as a guide to co-creation, as this will directly influence how the process is implemented, including generalisation and any possible inference that can be achieved. Identifying a methodology or framework that can be replicated will help us understand the effectiveness of co-creation research, allowing us to improve public health on a broad level.

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Conflict of interest

There is no conflict of interest

Key points

- Given the high rates of obesity in Black and minority ethnic communities in Europe, co-creation may be particularly beneficial in identifying and informing strategies to promote healthy weight maintenance.

- Although there is limited evidence of co-creation practices within ethnic minority populations, public health practitioners need to adopt a partnership model and co-design interventions to ensure programmes are relevant to their priorities and needs.
- Co-creation practices with marginalised and hard to reach communities may require flexibility and process orientation in order to accommodate their needs.

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Table 1: Demographic background of Black African migrant participants

Age	Female	Male	Total
18-25	4	3	7
26-45	6	7	11
46-55	5	5	12
Employment status			
Unemployed	2	0	2
Graduate/Post graduate student	2	0	2
Employed/self-employed	11	15	26
Participants countries of origin: Cameroon, Congo, Democratic Republic of Congo, Ghana, Kenya, Nigeria, Somali, South Africa, Sudan, Zambia and Zimbabwe.			

**Table 2: Co-creation intervention to promote healthy weight in early childhood:
a focus on minority children**

Actions	
Child-centred focus (0-5 years of age)	<ul style="list-style-type: none"> • Encourage breastfeeding as appropriate • Encourage sleeping and physical activity • Identify beliefs on weaning diet and advise accordingly in line with culturally specific norms.
	<ul style="list-style-type: none"> • Provide tailored information to encourage the family to adopt a healthy lifestyle. • Explore challenges that family have and refer to appropriate services e.g. nutrition literacy, proficiency in English, and seeking appropriate translation services. • Identify family diet, taking account of family norms such as the sleeping and physical activity of the family and child and advise accordingly – apply family-centred approach • Assess parental beliefs, modelling parenting skills on the likely impact of a child's weight e.g. encourage parents to adopt an authoritative approach to shape their children's diet and not rely solely on the child's likes and dislikes.
	<ul style="list-style-type: none"> • Utilise the African heritage eatwell to facilitate discussions about diet with parents. • The need for a culturally tailored diet - nutritional knowledge and skills in food preparation. • Develop culture-specific nuances on diet and weight. • Demonstrate an awareness of the process of acculturation and the key determinants of these processes. • Understand the socio-cultural perceptions of healthy diet, weight and physical activity.

Community empowerment	<ul style="list-style-type: none"> • Health and social care providers to partner with local and national agencies in order to empower communities to develop knowledge about the risks of obesity and being overweight.
	<ul style="list-style-type: none"> • Demonstrate an awareness of local food provision and empower local fast food outlets to provide alternatives for children and their families.
	<ul style="list-style-type: none"> • Identify or signpost families to access practical support such as: cooking classes, child-centred centres, local groceries and supermarkets.
Apply local and national policy/guidance on healthy weight	<ul style="list-style-type: none"> • Promote culturally specific policies/guidance for staff to apply – a healthy weight strategy in childhood.
	<ul style="list-style-type: none"> • Promote the role of individual health and social care providers in promoting culturally specific messages on healthy weight.
Sustainability	<ul style="list-style-type: none"> • Work in partnership with other health and social care providers and other statutory agencies and community groups to address the social, economic and psychological determinants of healthy weight
	<ul style="list-style-type: none"> • Ensure necessary follow-ups for children at risk.
	<ul style="list-style-type: none"> • Training of health and social care staff in cultural specific strategies to promote healthy diet across the lifespan
	<ul style="list-style-type: none"> • Advocate for culturally sensitive health promotion interventions for different communities - consider social, cultural, economic, environmental and psychological factors that influence dietary behaviour and motivation towards physical activity.
	<ul style="list-style-type: none"> • Work with local initiatives to advocate for healthy weight maintenance in a much broader and interconnected way.

Figure One

Promoting healthy weight in early childhood: a focus on Black African children

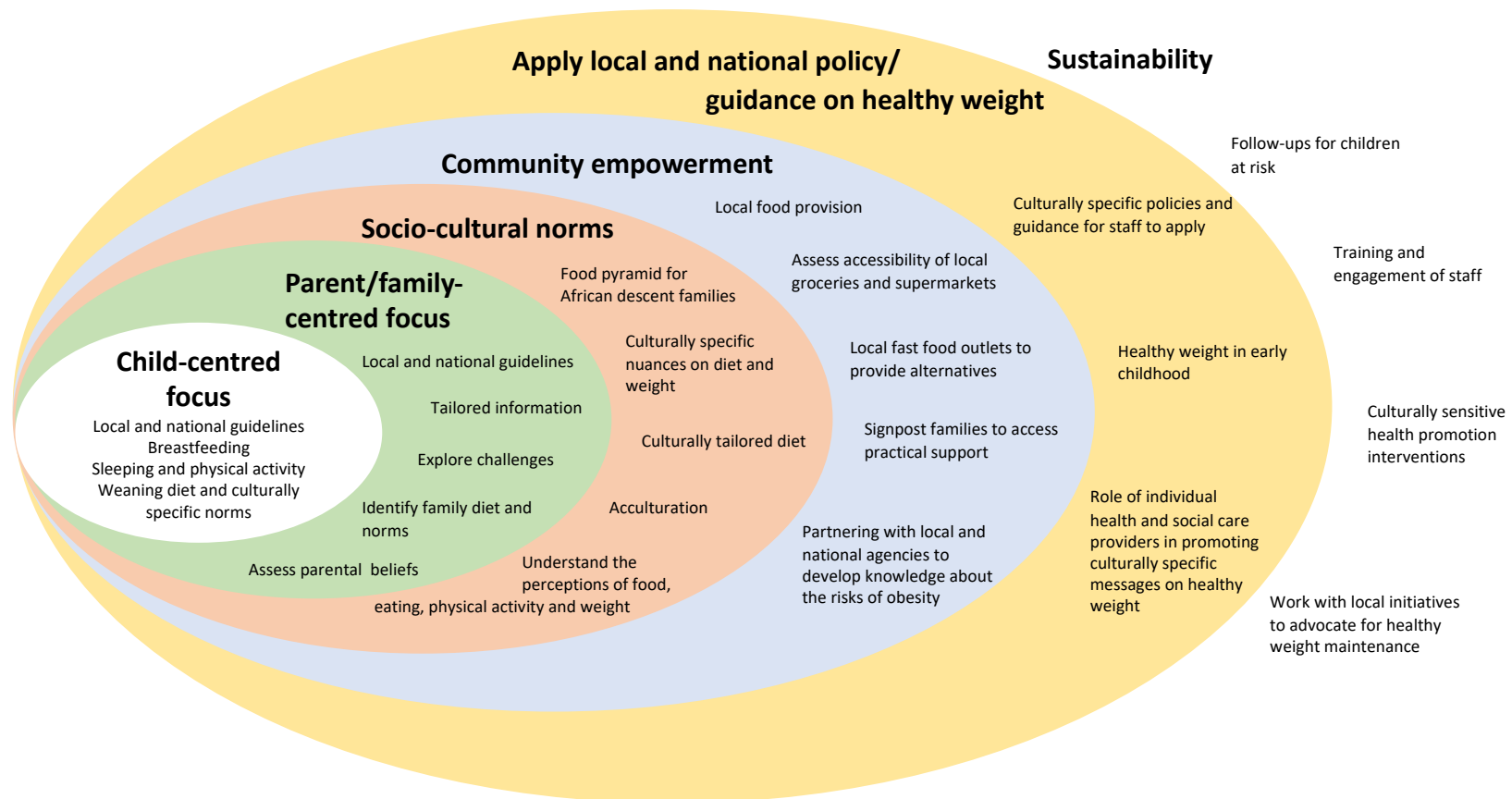


Figure 2

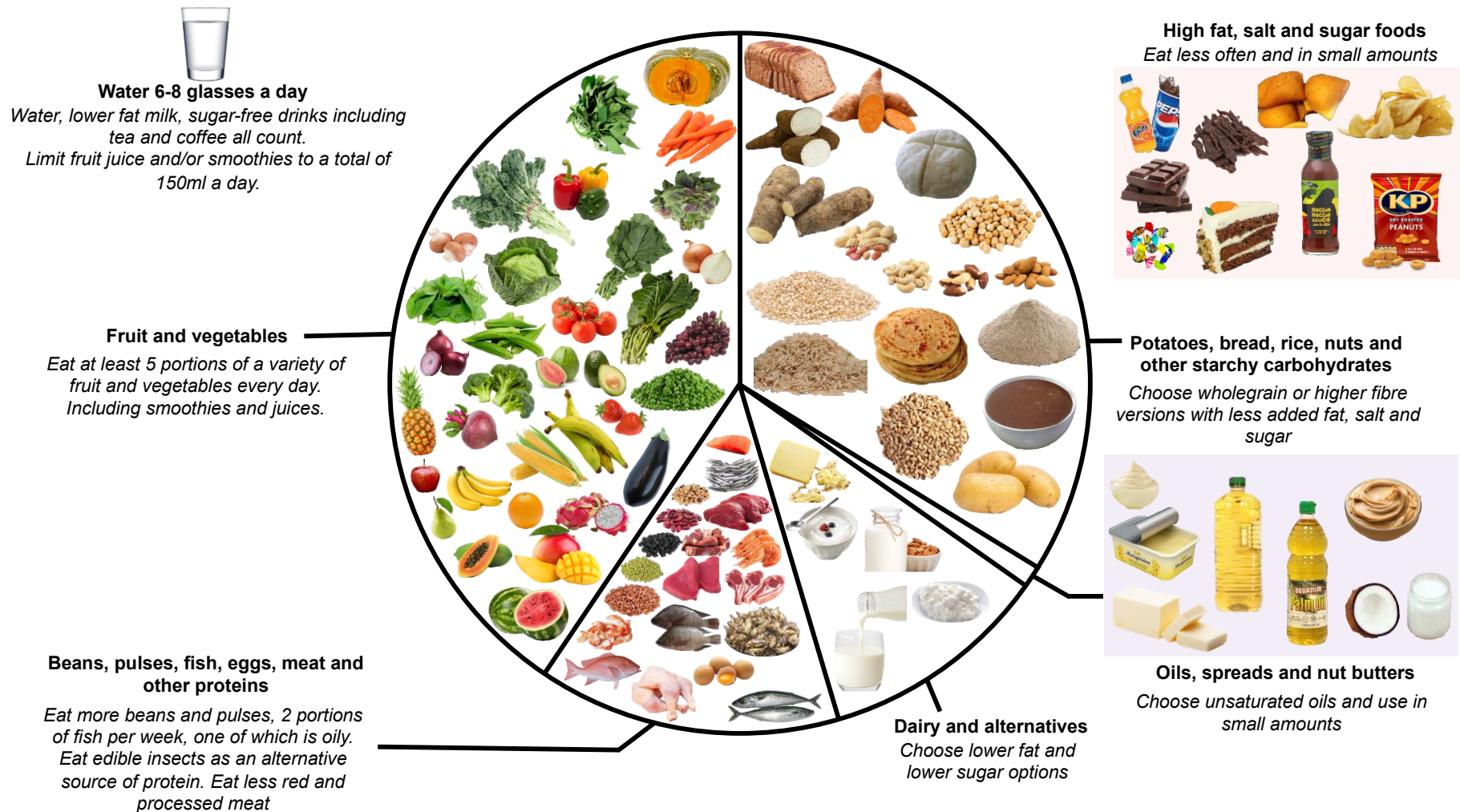


Figure 2 An example of an African-heritage Eatwell Guide (Adapted from Public Health England Eatwell Guide, 2016)